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EXAMINER	
JELINEK, BRIAN J	

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/835,213	ROBINS ET AL.
	Examiner	Art Unit
	Brian Jelinek	2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-35_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-35_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _13 April 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _4/13/2001_.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

This is a first office action in response to application no. 09/835,213 filed on 4/13/2001 in which claims 1-35 are presented for examination.

Claim Objections

Claims 3, 14, 21, and 32 are objected to because of the following informalities: there is insufficient antecedent basis for the limitation in the claim.

Claim 3, 14, 21, and 32 recites the limitation "the illuminant" in lines 2, 2 and 5, 2, and 2 of the claims, respectively. Appropriate correction is required

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-5, 9, and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Hardeberg (U.S. Pat. No. 6,728,401).

Regarding claim 1, Hardeberg teaches a method for comparing a color of a candidate specimen with a reference color (Fig. 4, element 430) stored in a digital camera (Fig. 1, element 110; col. 3, lines 45-49), the method comprising: capturing a digital image of the candidate specimen (Fig. 1, element 160); determining a color in the digital image of the candidate

specimen (Fig. 4, element 430); and computing the difference between the color of the candidate specimen and the reference color (Fig. 4, element 430).

Regarding claim 2, Hardeberg teaches illuminating the candidate specimen using flash for capturing the digital image of the candidate specimen (col. 1, lines 13-20).

Regarding claim 3, Hardeberg teaches normalizing the illuminant of the digital image to produce a normalized digital image, wherein the color of the candidate specimen is determined from the normalized digital image (col. 6, lines 15-31).

Regarding claim 4, Hardeberg teaches specifying a color-analysis sub-image (col. 3, line 59-col. 4, lines 4) after activating a color-comparison mode (Fig. 2) in the digital camera and prior to capturing any future digital images of the same candidate specimen.

Regarding claim 5, Hardeberg teaches reporting the difference (Fig. 3c, element 340) because reporting is interpreted to take place within the Hardeberg processor when difference data is subsequently routed to the appropriate processing circuit.

Regarding claim 9, Hardeberg teaches indicating when the difference is less than a predetermined tolerance (Fig. 3d).

Regarding claim 16, Hardeberg teaches the digital camera receives the reference color as a set of color coordinates from an external source (Fig. 4, element 420).

Regarding claim 17, Hardeberg teaches a method for comparing a color of a candidate specimen with a reference color (Fig. 4, element 430) stored in a digital camera (Fig. 1, element 110; col. 3, lines 45-49), the method comprising: capturing a digital image of the candidate specimen (Fig. 1, element 160); dividing the digital image into a plurality of sub-regions (Fig. 4, element 430, pixel); determining a color for each of the sub-regions (Fig. 4, element 430);

and computing the difference between the color of each region and the reference color (Fig. 4, element 430).

Regarding claim 18, Hardeberg teaches displaying in normal intensity each sub-region for which the corresponding difference is less than a predetermined tolerance and displaying all other sub-regions in reduced intensity (Fig. 3d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-8, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardeberg (U.S. Pat. No. 6,728,401) in view of Komai et al. (U.S. Pat. No. 5,218,555).

Regarding claim 6, Hardeberg teaches reporting the Euclidian distance in a color plane of an approximately perceptually linear color space (e.g. CIELAB) between the chrominance components of the reference color and the image color at that point (Fig. 4, element 430). Hardeberg does not teach reporting the difference comprises representing the color of the candidate specimen and the reference color on a color wheel.

However, Komai et al. shows reporting the difference comprises representing the color of the candidate specimen (Fig. 11, element Q) and the reference color (Fig. 11, element P) on a color wheel, which is defined by an elliptical (circular when $\varepsilon_a = \varepsilon_b$) boundary in the ab CIELAB

color plane. One of ordinary skill in the art would have represented the color of the candidate specimen and the reference color on a color wheel when reporting the difference for the purpose of determining if the line PQ extends past the elliptic (or circular) partial color space in order to determine if measured candidate color is within an acceptable color difference from a reference color (Fig. 11; col. 6, lines 15-43). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have represented the color of the candidate specimen and the reference color on a color wheel when reporting the difference for the purpose of determining if the line PQ extends past the elliptic (or circular) partial color space in order to determine if measured candidate color is within an acceptable color difference from a reference color

Regarding claim 7, please see the 103 rejection of claim 6 and note that a color wheel is a color map.

Regarding claim 8, Hardeberg further teaches that reporting the difference comprises representing a plurality of color difference values (Fig. 3c, element 340). Hardeberg does not teach reporting the difference comprises representing the color of the candidate specimen on a line having first and second ends, the first end representing the reference color and the second end representing the set of all colors that differ from the reference color by greater than a predetermined amount.

However, Komai et al. teaches reporting the difference comprises representing the color of the candidate specimen on a line having first and second ends (Fig. 11), the first end representing the reference color (Fig. 11, element P) and the second end representing the candidate color (Fig. 11, element Q). Furthermore, Komai et al. teaches an elliptical boundary

separates a color space into a first region of colors that differ from the reference color by less than a predetermined amount and second region of colors that differ from the reference color by greater than a predetermined amount (col. 6, lines 15-43). As shown in Fig. 11, point Q is a candidate color that differs from the reference color by greater than a predetermined amount and is representative of the set of all colors that differ from the reference color by greater than a predetermined amount.

One of ordinary skill in the art would have reported the difference according to the teaching of Komai et al. for the purpose of indicating both the angle and magnitude between a reference color and a candidate color in order to specify both the magnitude and direction of color difference. As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have reported the difference according to the teaching of Komai et al. for the purpose of indicating both the angle and magnitude between a reference color and a candidate color in order to specify both the magnitude and direction of color difference.

Regarding claim 10, Hardeberg teaches indicating when the difference is less than a predetermined tolerance (please see the 102 rejection of claim 9). Hardeberg does not teach that indicating the differences comprises representing on a color wheel the color of the candidate specimen, the reference color, and a circular boundary concentric with the reference color, the circular boundary encircling the color of the candidate specimen and the circular boundary representing the predetermined tolerance.

However, Komai et al. does teach representing on a color wheel the color of the candidate specimen (Fig. 11, element Q), the reference color (Fig. 11, element P), and a circular boundary concentric with the reference color (Fig. 11, ellipse, circle when $\varepsilon_a = \varepsilon_b$), the circular

boundary encircling the color of the candidate specimen when the candidate specimen differs from the reference color by less than a predetermined tolerance and the circular boundary representing the predetermined tolerance (col. 6, lines 15-43). One of ordinary skill in the art would have represented on a color wheel the color of the candidate specimen, the reference color, and a circular boundary concentric with the reference color, the circular boundary encircling the color of the candidate specimen in the case where the candidate specimen differs from the reference color by less than a predetermined tolerance and the circular boundary representing the predetermined tolerance in order to determine if the candidate color is within an acceptable color difference from the reference color (Fig. 11; col. 6, lines 15-43). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have represented on a color wheel the color of the candidate specimen, the reference color, and a circular boundary concentric with the reference color, the circular boundary encircling the color of the candidate specimen in the case where the candidate specimen differs from the reference color by less than a predetermined tolerance and the circular boundary representing the predetermined tolerance in order to determine if the candidate color is within an acceptable color difference from the reference color.

Regarding claim 11, Hardeberg further teaches indicating the difference comprises representing a plurality of color difference values (Fig. 3c, element 340). Hardeberg does not teach indicating when the difference is less than a predetermined tolerance comprises representing the color of the candidate specimen on a line having first and second portions, the first portion representing the set of all colors that differ from the reference color by less than the

predetermined tolerance and the second portion representing the set of all colors that differ from the reference color by an amount equal to or greater than the predetermined tolerance.

However, Komai et al. teaches indicating the difference comprises representing the color of the candidate specimen on a line having first and second ends (Fig. 11), the first end representing the reference color (Fig. 11, element P) and the second end representing the candidate color (Fig. 11, element Q). Furthermore, Komai et al. teaches an elliptical boundary separates a color space into a first region of colors that differ from the reference color by less than a predetermined amount and second region of colors that differ from the reference color by greater than a predetermined amount (col. 6, lines 15-43). As shown in Fig. 11, line segment PQ comprises a first portion (delta) representing the set of all colors that differ from the reference color by less than the predetermined tolerance and a second portion (Q-delta) representing the set of all colors that differ from the reference color by an amount equal to or greater than the predetermined tolerance.

One of ordinary skill in the art would have indicated the difference according to the teaching of Komai et al. for the purpose of indicating both the angle and magnitude between a reference color and a candidate color in order to specify both the magnitude and direction of color difference. As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have reported the difference according to the teaching of Komai et al. for the purpose of indicating both the angle and magnitude between a reference color and a candidate color in order to specify both the magnitude and direction of color difference.

Regarding claim 12, Hardeberg teaches indicating when the difference is less than a predetermined tolerance (please see the 102 rejection of claim 9). Hardeberg does not teach

indicating when the difference is less than a predetermined tolerance comprises emitting an audible signal.

However, Komai et al. does teach indicating when the difference is less than a predetermined tolerance comprises emitting an audible signal (col. 2, lines 59-62). One of ordinary skill in the art would have indicated when the differences is less than a predetermined tolerance by emitting an audible signal with a buzzer in order to warn a user when an abnormal color difference is detected (col. 2, lines 59-62). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have indicated when the differences is less than a predetermined tolerance by emitting an audible signal with a buzzer in order to warn a user when an abnormal color difference is detected.

Claims 13-15 and 19-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardeberg (U.S. Pat. No. 6,728,401) in view of Rice et al. (U.S. Pat. No. 6,563,510).

Regarding claim 13, Hardeberg teaches prior to capturing a digital image of the candidate specimen determining a reference color in a digital image by computing the color characteristics typical of a given artifact (col. 3, lines 35-42); and saving the reference color because it is implicit that if a reference color is computed it is necessarily stored at some point during the computation. Hardeberg does not teach capturing a digital image of a reference specimen; and determining a reference color in the digital image of the reference specimen.

However, Rice et al. teaches capturing a digital image of a specimen with a scanner and using a spectrophotometer to analyze the color in the scanning region in order to determine a reference color (col. 16, lines 17-47). One of ordinary skill in the art would have captured a

digital image of a reference specimen with a scanner and used a spectrophotometer to determine a reference color in a scanning region of the digital image in order to identify a paint color that most closely matches the reference color (col. 16, lines 17-47). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have captured a digital image of a reference specimen with a scanner and used a spectrophotometer to determine a reference color in a scanning region of the digital image in order to identify a paint color that most closely matches the reference color.

Regarding claim 14, Hardeberg teaches normalizing the illuminant of the digital image of the candidate specimen to produce a normalized digital image of the candidate specimen, wherein the color of the candidate specimen is determined from the normalized digital image of the candidate specimen (col. 6, lines 13-31). Furthermore, Hardeberg teaches normalizing the illuminant of a reference color, wherein the reference color is determined from the normalized digital image of the specimen (col. 6, lines 13-31). Hardeberg does capturing a digital image of a reference specimen, nor normalizing the illuminant of the digital image of the reference specimen to produce a normalized digital image of the reference specimen.

However, Rice et al. does teach capturing a digital image of a reference specimen in order to determine a reference color (col. 16, lines 17-47). Since Hardeberg teaches normalizing the luminance of both a candidate pixel and the reference color in order to factor out luminance differences, it would have been obvious to normalize the illuminant of a digital image of a reference specimen for the same reason, i.e. in order to factor out luminance differences.

Regarding claim 15, Hardeberg teaches illuminating the candidate specimen using flash for capturing a digital image of the candidate specimen (col. 1, lines 13-20). Official Notice is

given that it is well it is well known in the art to illuminate reference specimens using a flash in order to capture images of the reference specimen in dark conditions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to illuminate reference specimens using a flash in order to capture images of the reference specimen in dark conditions.

Regarding claim 19, Hardeberg teaches a method for storing a reference color in a digital camera (Fig. 1, element 110; col. 3, lines 45-49), the method comprising: determining a reference color in a digital image by computing the color characteristics typical of a given artifact (col. 3, lines 35-42); and saving the reference color because it is implicit that if a reference color is computed it is necessarily stored at some point during the computation. Hardeberg does not teach capturing a digital image of a reference specimen; and determining a reference color in the digital image of the reference specimen.

However, Rice et al. teaches capturing a digital image of a specimen with a scanner and using a spectrophotometer to analyze the color in the scanning region in order to determine a reference color (col. 16, lines 17-47). One of ordinary skill in the art would have captured a digital image of a reference specimen with a scanner and used a spectrophotometer to determine a reference color in a scanning region if the digital image in order to identify a paint color that most closely matches the reference color (col. 16, lines 17-47). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have captured a digital image of a reference specimen with a scanner and used a spectrophotometer to determine a reference color in a scanning region if the digital image in order to identify a paint color that most closely matches the reference color.

Regarding claim 20, Hardeberg teaches illuminating the candidate specimen using flash for capturing a digital image of the candidate specimen (col. 1, lines 13-20). Hardeberg does not teach illuminating a reference specimen using a flash. Official Notice is given that it is well it is well known in the art to illuminate reference specimens using a flash in order to capture images of the reference specimen in dark conditions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to illuminate reference specimens using a flash in order to capture images of the reference specimen in dark conditions.

Regarding claim 21, Hardeberg teaches normalizing the illuminant of a candidate digital image to produce a normalized digital image of the candidate specimen after capturing a digital image of the candidate specimen and prior to determining a color in the digital image of the candidate specimen, wherein the color is determined from the normalized digital image of the candidate specimen (col. 6, lines 13-30). Hardeberg does not teach the recited process may be performed on a reference specimen.

However, Rice et al. teaches capturing a digital image of a specimen with a scanner and using a spectrophotometer to analyze the color in the scanning region in order to determine a reference color (col. 16, lines 17-47). Furthermore, it is clear that one of ordinary skill in the art would have normalized the illuminant of the reference digital image to produce a normalized digital image of the reference specimen after capturing a digital image of the reference specimen and prior to determining a reference color in the digital image of the reference specimen, wherein the reference color is determined from the normalized digital image of the reference specimen for the purpose of factoring out differences resulting between the luminance of the reference and candidate specimens (col. 6, lines 23-30). As a result, it would have been obvious to one of

ordinary skill in the art at the time of the invention to have normalized the illuminant of the reference digital image to produce a normalized digital image of the reference specimen after capturing a digital image of the reference specimen and prior to determining a reference color in the digital image of the reference specimen, wherein the reference color is determined from the normalized digital image of the reference specimen for the purpose of factoring out differences resulting between the luminance of the reference and candidate specimens (col. 6, lines 23-30).

Regarding claim 22, Hardeberg teaches image capture circuitry (Fig. 1, element 160) for capturing an image in a digital camera. Hardeberg does not specifically teach specifying a color-analysis sub-image prior to capturing a digital image of a specimen. Official Notice is given that it is well known in the art to provide a digital camera with a digital zoom; and further, to use the digital zoom to specify a sub-image of the scene captured by the camera optics for the purpose of increasing the size of the desired object in the captured image. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have specified a color-analysis sub-image prior to capturing a digital image of a specimen by using a digital zoom to create an enlarged sub-image from a scene captured by the camera optics for the purpose of increasing the size of the desired object in the captured image.

Regarding claim 23, Hardeberg teaches a digital camera (col. 3, lines 45-49), comprising: an optical system for producing optical images of subjects (col. 1, lines 13-16); an imaging device for converting optical images received from the optical system to corresponding digital images (Fig. 1, element 160); a memory for storing the digital images (Fig. 1, element 150); and a controller configured to compute the difference between a first color and a second color

associated with a second digital image (Fig. 1, element 145; Fig. 4, element 430). Hardeberg does not teach that a first color is associated with a first digital image.

However, Rice et al. teaches capturing a digital image of a specimen with a scanner and using a spectrophotometer to analyze the color in the scanning region in order to determine a reference color (col. 16, lines 17-47). One of ordinary skill in the art would have captured a digital image of a specimen with a scanner and used a spectrophotometer to analyze a color in a scanning region in order to determine a reference color in order to identify a paint color that most closely matches the reference color (col. 16, lines 17-47). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have captured a digital image of a specimen with a scanner and used a spectrophotometer to analyze a color in a scanning region in order to determine a reference color in order to identify a paint color that most closely matches the reference color.

Regarding claim 24, Hardeberg teaches a flash unit for illuminating the subjects (col. 1, lines 13-20).

Regarding claim 25, Hardeberg teaches an illuminant normalization module for normalizing the illuminant of the digital images (col. 6, lines 13-31).

Regarding claim 26, Hardeberg teaches image capture circuitry (Fig. 1, element 160) for capturing an image in a digital camera. Hardeberg does not teach extracting a color-analysis sub-image from each of the digital images. Official Notice is given that it is well known in the art to provide a digital camera with a digital zoom; and further, to use the digital zoom to extract a color-analysis sub-image of the scene captured by the camera optics for the purpose of increasing the size of the desired object in the captured image. Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention to have extracted a color analysis sub-image from a digital image by using a digital zoom to create an enlarged sub-image from a scene captured by the camera optics for the purpose of increasing the size of the desired object in the captured image.

Regarding claim 27, Hardeberg teaches that a user may define a region of interest around a portion of a color image in order to identify an artifact; it is implicit that the camera comprises a display for specifying the region of interest color-analysis sub-image in order for a user to view the region of interest that they are defining (col. 4, lines 1-4).

Regarding claim 28, Hardeberg teaches reporting the difference (Fig. 3c, element 340). Hardeberg does not teach a display for reporting the difference. However, Rice et al. teaches a warning lamp may be used to report a color difference (col. 2, lines 59-62). One of ordinary skill in the art would have provided a warning lamp in order to warn a user when an abnormal color difference is detected (col. 2, lines 59-62). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a warning lamp as a display in order to warn a user when an abnormal color difference is detected.

Regarding claim 29, Hardeberg teaches a device for indicating when the difference is less than a predetermined tolerance (Fig. 3d).

Regarding claim 30, Hardeberg teaches a digital camera (Fig. 1, element 110; col. 3, lines 45-49) comprising: means for collecting optical images of subjects (Fig. 1, element 160); means for converting the optical images to corresponding digital images (Fig. 1, element 160); means for storing the digital images (Fig. 1, element 150); and means for computing the difference

between a first color and a second color associated with a digital image (Fig. 4, element 420). Hardeberg does not teach that a first color is associated with a first digital image.

However, Rice et al. teaches capturing a digital image of a specimen with a scanner and using a spectrophotometer to analyze the color in the scanning region in order to determine a reference color (col. 16, lines 17-47). One of ordinary skill in the art would have captured a digital image of a specimen with a scanner and used a spectrophotometer to analyze a color in a scanning region in order to determine a reference color in order to identify a paint color that most closely matches the reference color (col. 16, lines 17-47). As a result, it would have been obvious to one of ordinary skill in the art at the time of the invention to have captured a digital image of a specimen with a scanner and used a spectrophotometer to analyze a color in a scanning region in order to determine a reference color in order to identify a paint color that most closely matches the reference color.

Regarding claim 31, Hardeberg teaches means for illuminating the subjects (col. 1, lines 13-20).

Regarding claim 32, Hardeberg teaches means for normalizing the illuminant of the digital images (col. 6, lines 13-31).

Regarding claim 33, Hardeberg teaches image capture circuitry (Fig. 1, element 160) for capturing an image in a digital camera. Hardeberg does not specifically teach means for specifying a color-analysis sub-image for each of the digital images. Official Notice is given that it is well known in the art to provide a digital camera with a digital zoom; and further, to use the digital zoom to specify a sub-image of the scene captured by the camera optics for the purpose of increasing the size of the desired object in the captured image. Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention to have specified a color-analysis sub-image prior to capturing a digital image of a specimen by using a digital zoom to create an enlarged sub-image from a scene captured by the camera optics for the purpose of increasing the size of the desired object in the captured image.

Regarding claim 34, Hardeberg teaches means for reporting the difference (Fig. 3c, element 340) because reporting is interpreted to take place within the Hardeberg's processor as difference data is routed to the appropriate subsequent processing circuit.

Regarding claim 35, Hardeberg teaches means for indicating when the difference is less than a predetermined tolerance (Fig. 3d).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Jelinek whose telephone number is (703) 305-4724. The examiner can normally be reached on M-F 8:00 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Jelinek
12/10/2004

ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600